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Emissions Inventory and Emission factors for Cement Industry

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Abstract: Emissions inventory is the foundation of air quality impact assessment. Developing a sound emissions inventory should be the prime task and requires a collation of a significant amount of data. The emissions inventory for the premises is useful to identify all kinds of sources of air pollution and the air pollutants emitted from each source. It is also useful to compute and estimate the emission concentration and the rate of air pollutants emitted. The current investigation deals with an emission inventory for the Criteria air pollutants of Suspended Particulate Matter (SPM), Sulfur oxides (SO₂), and Nitrogen oxides (NO_x) from stationary sources in cement industry, which will show the severe environmental impact on man, material, livestock and vegetation. Emission database was developed for Ultra Tech Cement Ltd Bhogasamudram, Andhra Pradesh, India. Emission factors are calculated for the pollutants. The methods used for inventory presentation are Manufacturers' design specifications and direct measurement. The results observed from supplier's specifications and direct measurements are comparatively equal. Here Sulfur dioxide and Nitrogen oxides values are little difference due to incomplete combustion of coal.

Keywords: cement industry; Emission inventory; Criteria pollutants; emission concentration; Impact assessment.

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